

REMARKS

Claims 1-17 and 19-35 are currently pending in this application. Claims 1 and 25 are currently amended. Claim 18 was previously canceled. Applicants respectfully request reconsideration in light of the above amendments and following remarks.

Response to Rejection under 35 U.S.C. § 112

Claims 1 and 33-35 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In response, claim 1 has been amended to provide the full name of the protein for which the LTP abbreviation stands, Lipid Transfer Protein, which is a well known pan-allergen present in fruits and vegetables.

Claims 33-35 are rejected on the grounds that “no amounts or degrees of concentration are found in claim 1, it is not seen that the process of claim 1 would have produced such products.” Office Action at 2. This rejection is respectfully traversed. Applicants again assert that the degree of concentration in claim 1 is inherent in step d) adding the hypo-allergenic permeate to the hypo-allergenic pulp. Application at page 7, lines 2-8. The ratio of permeate added to the pulp will affect whether the hypo-allergenic fruit and/or vegetable derivative is a juice, nectar, jam, puree, or concentrate. For example, prior to adding permeate to the pulp, an optional treatment of concentrating the permeate to adjust the ratio of permeate to pulp in the fruit and/or vegetable derivative can be performed. Application at page 6, lines 10-15. This will have the effect of altering the concentration of claim 1.

Accordingly, Applicants respectfully request that the 35 U.S.C. § 112 rejection of claims 1 and 33-35 be withdrawn.

Response to Rejection under 35 U.S.C. § 103

Claims 1-5, 10-13, 28, 29, 32, and 33 are rejected under 35 U.S.C. § 103(a) as being unpatentable over European Patent No. 0137671 (“Winterson”) or European Patent No. 0174594.

("Lawhon") in view of U.S. Patent No. 2626706 ("Bishop"). This rejection is respectfully traversed.

Applicants first note that the Office Action has provided no motivation to combine the references in order to reach the claimed process. Bishop is directed to isolating pectin from sugar beet waste material, whereas the claimed process's ambition is to eliminate LTP from the serum and pulp of fruits and/or vegetables. Thus, no person of ordinary skill in the art would look to or use the process disclosed by Bishop in order to manufacture a hypo-allergenic fruit and/or vegetable derivative.

The Examiner argues that "[i]t would have been obvious to combine the references since the method shows washing a pulp with acid, which would have inherently reduced the microorganisms, just as applicants are" and that "Winterson is also to producing an inherently sterile fruit pulp by pasteurizing it, and Bishop also produces an inherently sterile vegetable pulp since it has been treated with acids which are known to reduce microbes." Office Action at 10. LTP, however, is neither a microorganism nor a microbe as asserted in the Office Action. As such, LTP cannot be construed as either. LTP is instead a protein naturally occurring in fruits and vegetables, to which some people have an allergy. Specification, ¶ [0006]. None of the references, Winterson, Lawhon, or Bishop, has shown any effect or aim to reduce allergenic compounds in the treated product. This is shown in that the hypoallergenic fruit and/or vegetable derivative also discloses an entirely separate step to preserve or sterilize the product. Specification, ¶ [0012].

In particular, there is no expectation that a process tailored for pectin extraction could be applied in the field of allergens or proteins, nor any likelihood that any person of ordinary skill in the art would try. Pectin is a compound belonging to the family of polysaccharides, thus, it has nothing to do from a chemical point of view with LTP, which is a protein. Bishop is attempting to isolate and purify the pectin from the beet pulp, not reduce allergenic content.

Further, the process for pectin recovery includes the steps of treating the sugar beet pulp with a mixture of alcohol and benzene (Bishop, col. 1, lines 43-47), then digesting the pulp residue

by heating at 180-190 °F for 1 to 2 hours (Bishop, col. 2, lines 40-42). Next, Bishop discloses separating the pulp by centrifugation (Bishop, col. 2, line 55 – col. 3, line 2), collecting a filtrate which contains pectin in solution (Bishop, col. 3, lines 2-4), and finally precipitating the pectin using an alcohol solution (Bishop, col. 3, lines 27-30). No aspect of Bishop shows that the acidification in Bishop is designed to eliminate microorganisms as asserted in the Office Action. In fact, the acidification of Bishop “hydrolyzes and dissolves those pectin materials not previously removed from the cell fibres” thus making it easier to isolate the pectin. Bishop, col. 5, lines 51-53. Bishop is merely directed to a process for extracting the pectin from beet pulp to increase the value of the waste by-product. As such, there would be no motivation to combine Bishop with either Winterson or Lawhon.

The Examiner also asserts that Winterson would be used to render the claimed process obvious; however, as the Office Action notes, Winterson uses pasteurization to sterilize the pulp. Winterson at 4, lines 8-11. Pasteurization will be ineffective on LTP as LTP is a highly thermoresistant protein. The 86 to 99 °C pasteurization for 2 to 20 seconds disclosed by Winterson will be ineffective in reducing LTP content as shown in the attached article, Brenna, et al., *Technological Processes To Decrease the Allergenicity of Peach Juice and Nectar*, 48 J. AGRIC. FOOD CHEMISTRY 493 (2000).

Claims 2-5, 10-13, 28, 29, 32, and 33 depend from claim 1 and are allowable for at least the reasons discussed above, as well as on their own merits. Accordingly, Applicants respectfully request that the rejection of claims 1-5, 10-13, 28, 29, 32, and 33 be withdrawn.

Claims 6-9 are rejected under 35 U.S.C. § 103(a) as being unpatentable over the Winterson or Lawhon/Bishop combination further in view of U.S. Publ. Pat. App. No. 2005/00556161 (“Le Rouzic”) and U.S. Pat. No. 5653673 (“Desai”). This rejection is respectfully traversed.

Claims 6-9 depend from claim 1 and are non-obvious over Winterson or Lawhon in view of Bishop based upon the distinctions set forth above. Le Rouzic and Desai do not cure the

deficiencies of the proposed Winterson or Lawhon/Bishop combination discussed above. Accordingly, Applicants respectfully request that the rejection of claims 6-9 be withdrawn.

Claims 14-17 and 25-27 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Winterson or Lawhon in view of Bishop, further in view of BG61472 ("Todorov"). This rejection is respectfully traversed.

Claims 14-17 and 25-27 depend from claim 1 and are patentable over Winterson or Lawhon in view of Bishop based upon the distinctions set forth above. Todorov does not cure the deficiencies of the proposed Winterson or Lawhon/Bishop combination discussed above. Accordingly, Applicants respectfully request that the rejection of claims 14-17 and 25-27 be withdrawn.

Claims 19-24, 30, 31, 34, and 35 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over the Winterson or Lawhon/Bishop/Todorov combination, further in view of U.S. Pat. No. 4413017 ("Loader"). This rejection is respectfully traversed.

Claims 19-24, 30, 31, 34, and 35 depend from claim 1 and are patentable over Winterson or Lawhon in view of Bishop as discussed above. Loader does not cure the defects of the Winterson or Lawhon/Bishop combination discussed above. Accordingly, Applicants respectfully request that the rejection of claims 19-24, 30, 31, 34, and 35 be withdrawn.

In view of the above, Applicants believe the pending application is in condition for allowance.

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